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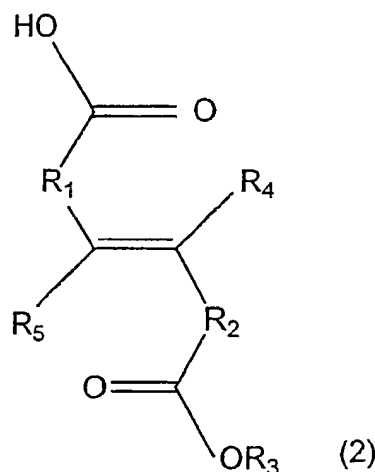
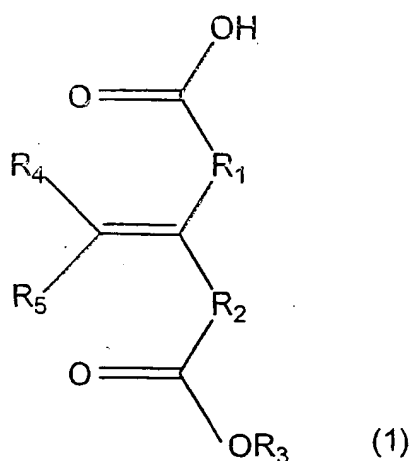
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- (51) 国際特許分類⁷: G03F 7/038, C08F 220/10 (74) 代理人: 酒井 宏明 (SAKAI, Hiroaki); 〒1000013 東京都千代田区霞が関三丁目 2 番 6 号 東京倶楽部ビルディング 酒井国際特許事務所 Tokyo (JP).
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- 添付公開書類:
— 国際調査報告書
- 2 文字コード及び他の略語については、定期発行される各 PCT ガゼットの巻頭に掲載されている「コードと略語のガイダンスノート」を参照。

(54) Title: NEGATIVE RESIST COMPOSITION AND PROCESS FOR FORMATION OF RESIST PATTERNS

(54) 発明の名称: ネガ型レジスト組成物およびレジストパターン形成方法



(57) Abstract: A negative resist composition containing a polymer comprising as a monomer component one member selected from among dicarboxylic monoesters represented by the general formulae (1) and (2); and a process for formation of resist patterns by using the same: (1) (2) [wherein R₁ and R₂ are each an alkyl chain of 0 to 5 carbon atoms; R₃ is a substituent having at least two alicyclic structures; and R₄ and R₅ are each hydrogen or alkyl of 1 to 8 carbon atoms]. By virtue of the polymer, the composition can form a resist pattern having improved resistances to dry etching and electron beam from a scanning electron microscope (SEM), while the solubility in an alkaline developing solution is maintained.

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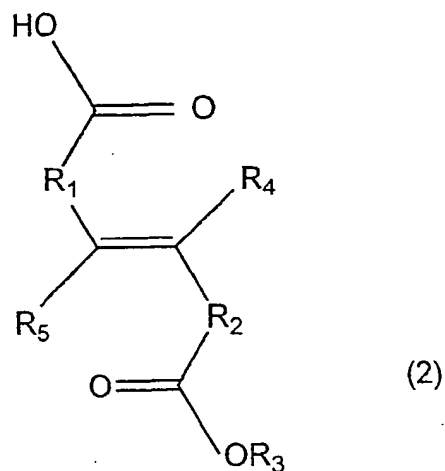
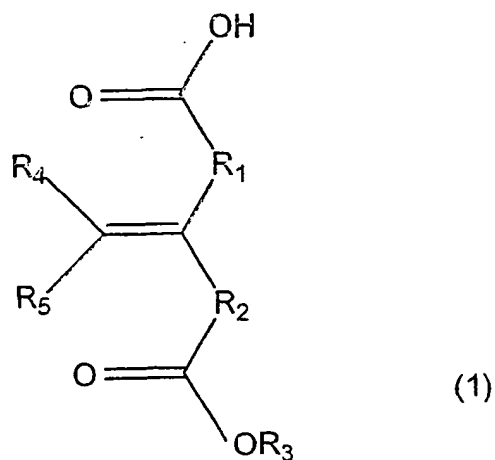
ATTACHMENT E

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(57) 要約:

下記一般式 (1) および (2) :



(式中、 R_1 および R_2 は炭素数0～5のアルキル鎖を表し、 R_3 は少なくとも2以上の脂環式構造を有する置換基を表し、 R_4 および R_5 は水素原子、または炭素数1～8のアルキル基を表す。) で表されるジカルボン酸モノエステル化合物のいずれか一種をモノマー成分として有する重合体を含むネガ型レジスト組成物及びそれを用いたレジストパターン形成方法。当該重合体を含有することにより、ドライエッチング耐性および走査型電子顕微鏡 (SEM) による電子線への耐性が向上するとともにアルカリ現像液に対する溶解性が維持される。

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/004080

A. CLASSIFICATION OF SUBJECT MATTER
Int.Cl⁷ G03F7/038, C08F220/10

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
Int.Cl⁷ G03F7/038, C08F220/10

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
Jitsuyo Shinan Koho 1922-1996 Jitsuyo Shinan Toroku Koho 1996-2004
Kokai Jitsuyo Shinan Koho 1971-2004 Toroku Jitsuyo Shinan Koho 1994-2004

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	① JP 2001-247513 A (Mitsubishi Rayon Co., Ltd.), 11 September, 2001 (11.09.01), Full text (Family: none)	1-5
A	② JP 2001-166474 A (JSR Corp.), 22 June, 2001 (22.06.01), Full text (Family: none)	1-5
A	③ JP 2000-284473 A (Fuji Photo Film Co., Ltd.), 13 October, 2000 (13.10.00), Full text & US 6432615 B1	1-5



Further documents are listed in the continuation of Box C.



See patent family annex.

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Date of the actual completion of the international search
27 May, 2004 (27.05.04)

Date of mailing of the international search report
15 June, 2004 (15.06.04)

Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP2004/004080

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	④ JP 2000-250204 A (Shin-Etsu Chemical Co., Ltd.), 14 September, 2000 (14.09.00), Full text & US 6395453 B1	1-5
A	⑤ JP 2000-206694 A (Tokyo Ohka Kogyo Co., Ltd.), 28 July, 2000 (28.07.00), Full text & US 2001-49073 A1	1-5
A	⑥ JP 2000-75486 A (Siemens AG.), 14 March, 2000 (14.03.00), Full text & EP 957399 A2 & US 6063543 A1	1-5
A	⑦ JP 2000-56459 A (Fujitsu Ltd.), 25 February, 2000 (25.02.00), Full text (Family: none)	1-5
A	⑧ JP 2000-26548 A (Siemens AG.), 25 January, 2000 (25.01.00), Full text & EP 952166 A2 & US 6306990 B1	1-5